

498 #2, 9, 11, 17 multistep  
4, 5, 7, 10, ~~12~~

$$\#4. a) \quad A = \frac{1000 \left[ (1 + 0.08/1)^3 - 1 \right]}{0.08/1}$$

$$= 3246.40$$

$$b) = \frac{500 \left[ (1 + \frac{0.075}{4})^{34} - 1 \right]}{0.075/4}$$

$$= 23482.98$$

$$c) \quad A = \frac{200 \left[ (1 + 0.0325/12)^{60} - 1 \right]}{0.0325/12}$$

$$= 13010.95$$

$$\#5 \quad 4000 = \frac{R \left[ (1 + \frac{0.06}{2})^{10} - 1 \right]}{0.06/2}$$

$$120 = R \left[ (1 + 0.06/2)^{10} - 1 \right]$$

$$\frac{120}{0.343916379} = \frac{0.343916379 R}{0.343916379}$$

$$R = 348.92$$

$\therefore$  the regular deposits  
will be \$348.92

$$\#7. a) = \frac{250 \left[ (1 + \frac{0.115}{4})^{140} - 1 \right]}{0.115/4}$$

$$= 451222.88$$

$\therefore$  the RRSP will be  
worth \$451222.88

$$b) \quad 12 \div 3 = 4 \quad (4 \text{ deposits a year})$$

$$4 \times 250 = 1000 \quad (\text{each year})$$

$$1000 \times 35 = 35000 \quad (\text{no interest})$$

$$\text{interest earned} = 451222.88 - 35000$$

$$= 416222.88$$

$\therefore$  \$416222.88 will be interest

$$\#10. \quad A = \frac{195 \left[ (1 + \frac{0.09}{12})^8 - 1 \right]}{0.09/12}$$

$$= 1601.57$$

$\therefore$  No, at the end of 8 months, he  
will have only \$1601.57.



#7 Geoff

$$A = 3600 \left(1 + \frac{0.06}{4}\right)^{12}$$
$$= 4304.23$$

Marilynn

$$A = \frac{300 \left[ \left(1 + \frac{0.06}{4}\right)^{12} - 1 \right]}{0.06/4}$$
$$= 3912.36$$

Difference

$$= 4304.23 - 3912.36$$
$$= 391.87$$

∴ Geoff's investment earns \$391.87 more.

#9. gift

$$= 2499 \times 1.14$$

$$= \boxed{2848.86} \text{ total}$$

$$A = \frac{225 \left[ \left(1 + \frac{0.035}{12}\right)^{12} - 1 \right]}{0.035/12}$$
$$= 2743.74$$

∴ he will not have enough

money. He will be short  $(2848.86 - 2743.74) = \$105.12$ .

#11

$$A = \frac{25 \left[ \left(1 + \frac{0.096}{12}\right)^{48} - 1 \right]}{0.096/12}$$
$$= 1455.95$$

$$A = 1455.95 \left(1 + \frac{0.096}{12}\right)^{120}$$
$$= 3788.00$$

∴ after 10 year Mario will have  
\$3788.00

#17

$$A = \frac{130 \left[ \left(1 + \frac{0.075}{12}\right)^{30} - 1 \right]}{0.075/12}$$

$$= 4274.95$$

∴ the balance left over  
is \$556.05

$$= 4831 - 4274.95$$

$$= 556.05$$